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10 CFR 52.99(c)(1)

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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.3.02.08a.i [Index Number 301]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.3.02.08a.i [Index Number 301]. This ITAAC verifies the Chemical Volume and Control System (CVS) provides makeup water to the Reactor Coolant System, provides pressurizer auxiliary spray, that controls exist in the main control room (MCR) to remotely operate system pumps and valves, that safety related displays can be retrieved in the MCR and that system valves operate as required. The closure process for this ITAAC is based on the guidance described in NEI 08-01, "Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52", which is endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli Roberts at 706-848-6991.

Respectfully submitted,



Jamie M. Coleman
Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4 ITAAC Closure Notification on Completion of ITAAC 2.3.02.08a.i [Index Number 301]

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cc: Regional Administrator, Region II
 Director, Office of Nuclear Reactor Regulation (NRR)
 Director, Vogtle Project Office NRR
 Senior Resident Inspector – Vogtle 3 & 4

**Southern Nuclear Operating Company
ND-23-0417
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.3.02.08a.i [Index Number 301]**

ITAAC Statement

Design Commitment

- 8.a) The CVS provides makeup water to the RCS.
- 8.b) The CVS provides the pressurizer auxiliary spray.
- 9. Safety-related displays identified in Table 2.3.2-1 can be retrieved in the MCR.
- 10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.3.2-1 to perform active functions.
- 10.b) The valves identified in Table 2.3.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.
- 11.a) The motor-operated and check valves identified in Table 2.3.2-1 perform an active safety-related function to change position as indicated in the table.
- 11.b) After loss of motive power, the remotely operated valves identified in Table 2.3.2-1 assume the indicated loss of motive power position.
- 12.a) Controls exist in the MCR to cause the pumps identified in Table 2.3.2-3 to perform the listed function.
- 12.b) The pumps identified in Table 2.3.2-3 start after receiving a signal from the PLS.
- 13. Displays of the parameters identified in Table 2.3.2-3 can be retrieved in the MCR.

Inspections/Tests/Analyses

i) Testing will be performed by aligning a flow path from each CVS makeup pump, actuating makeup flow to the RCS at pressure greater than or equal to 2000 psia, and measuring the flow rate in the makeup pump discharge line with each pump suction aligned to the boric acid storage tank.

Testing will be performed by aligning a flow path from each CVS makeup pump to the pressurizer auxiliary spray and measuring the flow rate in the makeup pump discharge line with each pump suction aligned to the boric acid storage tank and with RCS pressure greater than or equal to 2000 psia.

Inspection will be performed for retrievability of the safety-related displays in the MCR.

Stroke testing will be performed on the remotely operated valves identified in Table 2.3.2-1 using the controls in the MCR.

- i) Testing will be performed using real or simulated signals into the PMS.
- ii) Testing will be performed to demonstrate that the remotely operated CVS isolation valves CVS-V090, V091, V136A/B close within the required response time.

iii) Tests of the motor-operated valves will be performed under pre-operational flow, differential pressure, and temperature conditions.

iv) Exercise testing of the check valves with active safety functions identified in Table 2.3.2-1 will be performed under pre-operational test pressure, temperature and fluid flow conditions.

Testing of the remotely operated valves will be performed under the conditions of loss of motive power.

Testing will be performed to actuate the pumps identified in Table 2.3.2-3 using controls in the MCR.

Testing will be performed to confirm starting of the pumps identified in Table 2.3.2-3.

Inspection will be performed for retrievability of the displays identified in Table 2.3.2-3 in the MCR.

Acceptance Criteria

i) Each CVS makeup pump provides a flow rate of greater than or equal to 100 gpm.

Each CVS makeup pump provides spray flow to the pressurizer.

Safety-related displays identified in Table 2.3.2-1 can be retrieved in the MCR.

Controls in the MCR operate to cause the remotely operated valves identified in Table 2.3.2-1 to perform active functions.

i) The valves identified in Table 2.3.2-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.

ii) These valves close within the following times after receipt of an actuation signal:

V090, V091 < 30 sec

V136A/B < 20 sec

iii) Each motor-operated valve changes position as indicated in Table 2.3.2-1 under pre-operational test conditions.

iv) Each check valve changes position as indicated in Table 2.3.2-1.

Upon loss of motive power, each remotely operated valve identified in Table 2.3.2-1 assumes the indicated loss of motive power position.

Controls in the MCR cause pumps identified in Table 2.3.2-3 to perform the listed function.

The pumps identified in Table 2.3.2-3 start after a signal is generated by the PLS.

Displays identified in Table 2.3.2-3 can be retrieved in the MCR.

ITAAC Determination Basis

Multiple ITAAC were performed to verify by inspections and tests that each of the Chemical and Volume Control System (CVS) makeup pumps provide a flow rate of greater than or equal to 100 gpm to the Reactor Coolant System (RCS) and provides spray flow to the pressurizer. This ITAAC also ensures safety-related displays identified in Combined License (COL) Table 2.3.2-1 can be retrieved in the Main Control Room (MCR), displays identified in COL Table 2.3.2-3 can be retrieved in the MCR, controls in the MCR operate to cause the remotely operated valves identified in COL Table 2.3.2-1 to perform active functions, controls in the MCR cause pumps identified in COL Table 2.3.2-3 to perform the listed function, and the pumps identified in COL Table 2.3.2-3 start after a signal is generated by the Plant Control System (PLS). Additionally, this ITAAC verifies the valves identified in COL Table 2.3.2-1 as having Protection and Safety Monitoring System (PMS) control perform the active function identified in the table after receiving a signal from the PMS, valves close within the following times after receipt of an actuation signal: V090, V091 < 30 sec; V136A, V136B < 20 sec, each motor-operated valve and check valve change positions as indicated in COL Table 2.3.2-1 under preoperational test conditions. Upon loss of motive power, each remotely operated valve identified in COL Table 2.3.2-1 assumes the loss of motive power position.

i) Each CVS makeup pump provides a flow rate of greater than or equal to 100 gpm.

Testing was performed in accordance with Unit 4 pre-operational test procedure listed in SV4-CVS-ITR-800301 (Reference 1) to confirm that with suction aligned to the boric acid storage tank, the Reactor Coolant System (RCS) at greater than or equal to 2000 psia and a flow path established to the RCS, that each CVS makeup pump provides greater than or equal to 100 gpm flow rate measured at the pump discharge.

With the RCS at 555°F - 559°F and 2220 psig – 2250 psig, the CVS system was aligned to perform a boron addition to the RCS. The A CVS makeup pump suction was aligned to the boric acid storage tank and a boron addition was initiated using the operating procedure. The flow rate on the discharge line of the A CVS makeup pump was monitored and trended. This testing was repeated utilizing the B CVS makeup pump. The Unit 4 A CVS makeup pump flow rate was 106.837 gpm and the Unit 4 B CVS makeup pump flow rate was 106.893 gpm.

The completed test results (Reference 1) confirmed that each CVS makeup pump provides a flow rate of greater than or equal to 100 gpm with the RCS at greater than or equal to 2000 psia.

Each CVS makeup pump provides spray flow to the pressurizer.

Testing was performed in accordance with Unit 4 pre-operational test procedure listed in SV4-CVS-ITR-800301 (Reference 1) to confirm that with suction aligned to the boric acid storage tank, the Reactor Coolant System (RCS) at greater than or equal to 2000 psia and a flow path established to the pressurizer auxiliary spray, that each CVS makeup pump provides spray flow to the pressurizer.

With the RCS at 555°F - 559°F degrees and 2220 psig – 2250 psig, the CVS system was aligned to provide make-up to the RCS. The makeup flow control valve was placed in manual, suction was aligned to the boric acid storage tank, and the A CVS makeup pump was started. The auxiliary spray valve was opened, and the makeup flow control valve was throttled open until flow was established. The discharge flow rate was monitored and trended. The B CVS makeup pump was started, and the A CVS makeup pump was stopped. The makeup flow

control valve was throttled to provide flow at the pump discharge and the flow rate was monitored and trended. The Unit 4 A CVS makeup pump flow rate was verified to be greater than or equal to 50 gpm and the Unit 4 B CVS makeup pump flow rate was verified to be greater than or equal to 50 gpm.

The completed test results (Reference 1) confirmed that each CVS makeup pump provides spray flow to the pressurizer with the RCS at greater than or equal to 2000 psia.

Safety-related displays identified in Table 2.3.2-1 can be retrieved in the MCR.

An inspection was performed as documented in SV4-CVS-ITR-801301 (Reference 2) to ensure the safety-related displays identified in Combined License (COL) Table 2.3.2-1 (Attachment A) can be retrieved in the MCR.

The valves listed in Attachment A as having safety-related displays for valve position are located on the MCR PMS Visual Display Units (VDUs) and verified to indicate on each of the VDUs.

The completed inspection results (Reference 2) confirmed that safety-related displays identified in Table 2.3.2-1 can be retrieved in Unit 4 MCR.

Controls in the MCR operate to cause the remotely operated valves identified in Table 2.3.2-1 to perform active functions.

Stroke testing was performed in accordance with Unit 4 component test work package listed in SV4-CVS-ITR-804301 (Reference 5) using controls in the MCR to confirm that the remotely operated valves identified in COL Table 2.3.2-1 (Attachment B) perform their active function.

The valves identified in Attachment B were stroke tested using an operator workstation in the MCR. The valves were initially opened and were stroked closed using the Plant Control System (PLS) and verified locally to have closed.

The completed test results (Reference 5) confirmed that controls in Unit 4 MCR operate to cause the remotely operated valves identified in Table 2.3.2-1 to perform active functions.

i) The valves identified in Table 2.3.2-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.

Testing was performed in accordance with Unit 4 component test procedures listed in SV4-CVS-ITR-802301 (Reference 3). These component test packages confirm that the valves identified in Table 2.3.2-1 (Attachment C) as having PMS control perform the active function identified in the table after receiving a signal from the PMS.

The component test packages in Reference 3 established initial conditions with each valve verified locally and in the MCR to be in the open position. An actuation signal was generated by PMS using the PMS Maintenance and Test Panel (MTP) to generate a signal to close the valves in Attachment C. Each valve was verified locally and in the MCR to be closed.

The completed test results (Reference 3) demonstrated that the valves identified in Table 2.3.2-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.

ii) These valves close within the following times after receipt of an actuation signal: V090, V091 < 30 sec, V136A/B < 20 sec.

Testing was performed in accordance with Unit 4 component test procedures listed in SV4-CVS-ITR-802301 (Reference 3). These component test packages confirm that the valves identified in Table 2.3.2-1 (Attachment D) close within the following times after receipt of an actuation signal: V090, V091 < 30 sec, V136A/B < 20 sec.

Testing was performed using the component test packages in reference 3 and positioned the valves to the open position. An actuation signal was generated by PMS using the PMS Maintenance and Test Panel (MTP) to generate a signal to close the valves and the valves were verified locally and in the MCR to be closed. The valve closure times are listed in Attachment D.

The completed test results (Reference 3) demonstrated that the Unit 4 valves close within the following times after receipt of an actuation signal: V090, V091 < 30 sec, V136A/B < 20 sec.

iii) Each motor-operated valve changes position as indicated in Table 2.3.2-1 under pre-operational test conditions.

Testing was performed in accordance with Unit 4 pre-operational test procedure listed in SV4-CVS-ITR-800301 (Reference 1) to confirm the motor-operated valves listed in COL Appendix C Table 2.3.2-1 (Attachment E) change position under pre-operational flow, differential pressure, and temperature conditions.

Testing established the pre-operational test conditions of RCS at atmospheric pressure and ambient temperature and ensured the RCS makeup rate was greater than or equal to 135 gpm and less than or equal to 175 gpm which provided the greatest differential pressure for makeup line Motor-operated Valve (MOV) operation. CVS-PL-V090 was closed and verified to be closed locally and then reopened. The pre-operational test conditions were re-verified and CVS-PL-V091 was closed and verified to be closed locally.

Pre-operational test conditions were established with the RCS at 555°F - 559°F degrees and 2220 psig – 2250 psig with purification in service at normal operating temperature and pressure. CVS-PL-V001 was closed and verified to be closed locally and then CVS-PL-V001 was re-opened. Pre-operational test conditions were re-verified and CVS-PL-V002 was closed and verified to be closed locally, then CVS-PL-V002 was opened. The pre-operational test conditions were re-verified and CVS-PL-V003 was closed and verified to be closed locally.

The completed test results (Reference 1) demonstrated that each motor-operated valve for Unit 4 changes position as indicated in Table 2.3.2-1 under pre-operational test conditions.

iv) Each check valve changes position as indicated in Table 2.3.2-1.

Testing was performed in accordance with work orders listed in Reference 1 to confirm that each check valve with an active safety function changes position as indicated in COL Table 2.3.2-1 (Attachment F) under pre-operational test pressure, temperature, and fluid flow conditions.

Testing established the pre-operational test conditions of gas flowing to CVS-PL-V217 with a pressure between 58.1 and 59 psig. CVS-PL-V217 was verified to open by test connections on CVS-PL-V218 and CVS-PL-V216. Once required pressure was reached, CVS-PL-V217 was

verified to close by measuring its leakage rate, which is within the containment leak rate test program limits (i.e., approximately 0.6% of the administrative limit).

Testing established the pre-operational test conditions of RCS at atmospheric pressure and ambient temperature and makeup in service. CVS-PL-V081 was closed and CVS-PL-V067 was verified to be open by ultrasonic flow indication. CVS-PL-V081 was reopened, and ultrasonic flow indication (no flow) and non-intrusive monitoring were used to demonstrate that CVS-PL-V067 was closed.

Testing established the pre-operational test conditions of RCS at atmospheric pressure and ambient temperature and makeup and purification in service. CVS-PL-V091 was closed and CVS-PL-V100 was verified to open by ultrasonic flow instrument indication. CVS-PL-V091 was opened and CVS-PL-V100 was verified to close by flow indication (no flow).

Pre-operational test conditions were established with the RCS at 555°F - 559°F degrees and 2220 psig – 2250 psig for the performance of the check valve testing that follows.

With pre-operational test conditions established and purification flow established, CVS-PL-V001 was closed and check valves CVS-PL-V080, CVS-PL-V081, and CVS-PL-V082 were verified to close using non-intrusive valve disc position verification.

With pre-operational test conditions established and purification and pressurizer auxiliary spray in service, CVS-PL-V081 was opened, and CVS-PL-V085 was verified to close using non-intrusive valve disc position verification.

The completed test results (Reference 1) demonstrated that each check valve for Unit 4 changes position as indicated in Table 2.3.2-1.

Upon loss of motive power, each remotely operated valve identified in Table 2.3.2-1 assumes the indicated loss of motive power position.

Testing was performed in accordance with Unit 4 component test procedures listed in SV4-CVS-ITR-803301 (Reference 4) to verify that each remotely operated valve identified in COL Table 2.3.2-1 (Attachment G) assume the indicated loss of motive power position upon a loss of motive power.

The motor-operated valves were placed in the closed position and the power supply to the motor operator was opened. The valves were verified to remain in the closed position and an attempt was made to open the valves with controls in the MCR. The valves were verified to remain in the closed position locally. The air operated valves were placed in the open position and verified to be open locally. Power to the air supply solenoids were opened, which isolates the supply air and opens a vent port, and the valves were verified to close locally. An attempt to open the valves was made using the controls in the MCR and the valves were verified to remain closed locally.

The completed test results (Reference 4) confirmed that upon loss of motive power on Unit 4, each remotely operated valve identified in Table 2.3.2-1 assumes the indicated loss of motive power position.

Controls in the MCR cause pumps identified in Table 2.3.2-3 to perform the listed function.

Testing was performed in accordance with Unit 4 component test procedure listed in SV4-CVS-ITR-805301 (Reference 6) to confirm controls in the MCR cause the pumps identified in COL Table 2.3.2-3 (Attachment H) to perform the listed function.

Testing was performed at an operator workstation by navigating to the CVS makeup and letdown system screen. The A CVS makeup pump was started and verified to be running locally. The A CVS makeup pump was stopped, and the B CVS makeup pump was started and verified to be running locally.

The completed test results (Reference 6) confirmed that controls in Unit 4 MCR cause pumps identified in Table 2.3.2-3 to perform the listed function.

The pumps identified in Table 2.3.2-3 start after a signal is generated by the PLS.

Testing was performed in accordance with Unit 4 component test procedure listed in SV4-CVS-ITR-805301 (Reference 6) to confirm controls in the MCR cause the pumps identified in COL Table 2.3.2-3 (Attachment H) to perform the listed function.

Testing was performed at a PLS operator workstation by navigating to the CVS - makeup and letdown system screen. The A CVS makeup pump was started and verified to be running locally. The A CVS makeup pump was stopped, and the B CVS makeup pump was started and verified to be running locally.

The completed test results (Reference 6) confirmed that controls in Unit 4 MCR cause pumps identified in Table 2.3.2-3 to perform the listed function.

Displays identified in Table 2.3.2-3 can be retrieved in the MCR.

An inspection was performed in accordance with Unit 4 component test procedure listed in SV4-CVS-ITR-801301 (Reference 2) to confirm displays identified in COL Table 2.3.2-3 (Attachment I) can be retrieved in the MCR.

The inspection was performed at an operator workstation by navigating to several CVS system screens, locating the items identified in Attachment I, and ensuring the items identified could be retrieved in the MCR.

The completed inspection results (Reference 2) confirmed that displays identified in Table 2.3.2-3 can be retrieved in the Unit 4 MCR.

References 1 through 6 are available for NRC inspection as part of Unit 4 ITAAC Completion Package (Reference 7).

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there were no relevant ITAAC findings

associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.3.02.08a.i (Reference 7) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.3.02.08a.i was performed for VEGP Unit 4 and that the prescribed acceptance criteria were met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

References (available for NRC inspection)

1. SV4-CVS-ITR-800301, Rev. 0, "Unit 4 Recorded Results of Chemical and Volume Control System: ITAAC 2.3.02.08a.i Items 8.a), 8.b), 11.a)iii) and 11.a)iv) NRC Index Number: 301"
2. SV4-CVS-ITR-801301, Rev. 0 "Unit 4 Recorded Results of Chemical and Volume Control System: ITAAC 2.3.02.08a.i Items 9 and 13 NRC Index Number: 301"
3. SV4-CVS-ITR-802301, Rev. 0 "Unit 4 Recorded Results of Chemical and Volume Control System: ITAAC 2.3.02.08a.i Item 10.b) NRC Index Number: 301"
4. SV4-CVS-ITR-803301, Rev. 0 "Unit 4 Recorded Results of Chemical and Volume Control System: ITAAC 2.3.02.08a.i Item 11.b. NRC Index Number: 301"
5. SV4-CVS-ITR-804301, Rev. 0, "Unit 4 Recorded Results of Chemical and Volume Control System: ITAAC 2.3.02.08a.i Item 10.a"
6. SV4-CVS-ITR-805301, Rev. 0 "Unit 4 Recorded Results of Chemical and Volume Control System: ITAAC 2.3.02.08a.i Items 12.a) and 12.b) NRC Index Number: 301"
7. 2.3.02.08a.i-U4-CP-Rev0, ITAAC Completion Package.

Attachment A

*Excerpt from COL Appendix C Table 2.3.2-1

*Equipment Name	*Tag No.	*Safety-Related Display
RCS Purification Motor-operated Isolation Valve	CVS-PL-V001	Yes (Valve Position)
RCS Purification Motor-operated Isolation Valve	CVS-PL-V002	Yes (Valve Position)
RCS Purification Motor-operated Isolation Valve	CVS-PL-V003	Yes (Valve Position)
CVS Letdown Containment Isolation Valve	CVS-PL-V045	Yes (Valve Position)
CVS Letdown Containment Isolation Valve	CVS-PL-V047	Yes (Valve Position)
CVS Auxiliary Pressurizer Spray Line Pressure Boundary Valve	CVS-PL-V084	Yes (Valve Position)
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V090	Yes (Valve Position)
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V091	Yes (Valve Position)
CVS Zinc Injection Containment Isolation Valve ORC	CVS-PL-V092	Yes (Valve Position)
CVS Zinc Injection Containment Isolation Valve IRC	CVS-PL-V094	Yes (Valve Position)
CVS Demineralized Water Isolation Valve	CVS-PL-V136A	Yes (Valve Position)
CVS Demineralized Water Isolation Valve	CVS-PL-V136B	Yes (Valve Position)
CVS Hydrogen Injection Containment Isolation Valve ORC	CVS-PL-V219	Yes (Valve Position)

Attachment B

*Excerpt from COL Appendix C Table 2.3.2-1

Table 2.3.2-1			
*Equipment Name	*Tag No.	*Remotely Operated Valve	*Active Function
RCS Purification Motor-operated Isolation Valve	CVS-PL-V001	Yes	Transfer Closed
RCS Purification Motor-operated Isolation Valve	CVS-PL-V002	Yes	Transfer Closed
RCS Purification Motor-operated Isolation Valve	CVS-PL-V003	Yes	Transfer Closed
CVS Letdown Containment Isolation Valve	CVS-PL-V045	Yes	Transfer Closed
CVS Letdown Containment Isolation Valve	CVS-PL-V047	Yes	Transfer Closed
CVS Auxiliary Pressurizer Spray Line Pressure Boundary Valve	CVS-PL-V084	Yes	Transfer Closed
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V090	Yes	Transfer Closed
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V091	Yes	Transfer Closed
CVS Zinc Injection Containment Isolation Valve ORC	CVS-PL-V092	Yes	Transfer Closed
CVS Zinc Injection Containment Isolation Valve IRC	CVS-PL-V094	Yes	Transfer Closed
CVS Demineralized Water Isolation Valve	CVS-PL-V136A	Yes	Transfer Closed
CVS Demineralized Water Isolation Valve	CVS-PL-V136B	Yes	Transfer Closed
CVS Hydrogen Injection Containment Isolation Valve ORC	CVS-PL-V219	Yes	Transfer Closed

Attachment C

*Excerpt from COL Appendix C Table 2.3.2-1

Table 2.3.2-1			
*Equipment Name	*Tag No.	*Control PMS	*Active Function
RCS Purification Motor-operated Isolation Valve	CVS-PL-V001	Yes	Transfer Closed
RCS Purification Motor-operated Isolation Valve	CVS-PL-V002	Yes	Transfer Closed
RCS Purification Motor-operated Isolation Valve	CVS-PL-V003	Yes	Transfer Closed
CVS Letdown Containment Isolation Valve	CVS-PL-V045	Yes	Transfer Closed
CVS Letdown Containment Isolation Valve	CVS-PL-V047	Yes	Transfer Closed
CVS Auxiliary Pressurizer Spray Line Pressure Boundary Valve	CVS-PL-V084	Yes	Transfer Closed
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V090	Yes	Transfer Closed
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V091	Yes	Transfer Closed
CVS Zinc Injection Containment Isolation Valve ORC	CVS-PL-V092	Yes	Transfer Closed
CVS Zinc Injection Containment Isolation Valve IRC	CVS-PL-V094	Yes	Transfer Closed
CVS Demineralized Water Isolation Valve	CVS-PL-V136A	Yes	Transfer Closed
CVS Demineralized Water Isolation Valve	CVS-PL-V136B	Yes	Transfer Closed
CVS Hydrogen Injection Containment Isolation Valve ORC	CVS-PL-V219	Yes	Transfer Closed

Attachment D

*Excerpt from COL Appendix C Table 2.3.2-1

Table 2.3.2-1				
*Equipment Name	*Tag No.	*Remotely Operated Valve	*Control PMS	*Closure Time
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V090	Yes	Yes	16 sec
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V091	Yes	Yes	24 sec
CVS Demineralized Water Isolation Valve	CVS-PL-V136A	Yes	Yes	8 sec
CVS Demineralized Water Isolation Valve	CVS-PL-V136B	Yes	Yes	7 sec

Attachment E

*Excerpt from COL Appendix C Table 2.3.2-1

Table 2.3.2-1		
*Equipment Name	*Tag No.	*Active Function
RCS Purification Motor-operated Isolation Valve	CVS-PL-V001	Transfer Closed
RCS Purification Motor-operated Isolation Valve	CVS-PL-V002	Transfer Closed
RCS Purification Motor-operated Isolation Valve	CVS-PL-V003	Transfer Closed
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V090	Transfer Closed
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V091	Transfer Closed

Attachment F

*Excerpt from COL Appendix C Table 2.3.2-1

Table 2.3.2-1		
*Equipment Name	*Tag No.	*Active Function
CVS Makeup Return Line Bypass Check Valve	CVS-PL-V067	Transfer Open/ Transfer Closed
CVS Purification Return Line Pressure Boundary Check Valve	CVS-PL-V080	Transfer Closed
CVS Purification Return Line Pressure Boundary Isolation Check Valve	CVS-PL-V081	Transfer Closed
CVS Purification Return Line Pressure Boundary Check Valve	CVS-PL-V082	Transfer Closed
CVS Auxiliary Pressurizer Spray Line Pressure Boundary Check Valve	CVS-PL-V085	Transfer Closed
CVS Makeup Line Containment Isolation Thermal Relief Valve	CVS-PL-V100	Transfer Open/ Transfer Closed
CVS Hydrogen Injection Containment Isolation Check Valve IRC	CVS-PL-V217	Transfer Closed

Attachment G

*Excerpt from COL Appendix C Table 2.3.2-1

Table 2.3.2-1			
*Equipment Name	*Tag No.	*Remotely Operated Valve	*Loss of Motive Power Position
RCS Purification Motor-operated Isolation Valve	CVS-PL-V001	Yes	As Is
RCS Purification Motor-operated Isolation Valve	CVS-PL-V002	Yes	As Is
RCS Purification Motor-operated Isolation Valve	CVS-PL-V003	Yes	As Is
CVS Letdown Containment Isolation Valve	CVS-PL-V045	Yes	Closed
CVS Letdown Containment Isolation Valve	CVS-PL-V047	Yes	Closed
CVS Auxiliary Pressurizer Spray Line Pressure Boundary Valve	CVS-PL-V084	Yes	Closed
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V090	Yes	As Is
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V091	Yes	As Is
CVS Zinc Injection Containment Isolation Valve ORC	CVS-PL-V092	Yes	Closed
CVS Zinc Injection Containment Isolation Valve IRC	CVS-PL-V094	Yes	Closed
CVS Demineralized Water Isolation Valve	CVS-PL-V136A	Yes	Closed
CVS Demineralized Water Isolation Valve	CVS-PL-V136B	Yes	Closed
CVS Hydrogen Injection Containment Isolation Valve ORC	CVS-PL-V219	Yes	Closed

Attachment H

*Excerpt from COL Appendix C Table 2.3.2-3

Table 2.3.2-1		
*Equipment	*Tag No.	*Control Function
CVS Makeup Pump A	CVS-MP-01A	Start
CVS Makeup Pump B	CVS-MP-01B	Start

Attachment I

*Excerpt from COL Appendix C Table 2.3.2-3

*Equipment Name	*Tag No.	*Display
CVS Makeup Pump A	CVS-MP-01A	Yes (Run Status)
CVS Makeup Pump B	CVS-MP-01B	Yes (Run Status)
Purification Flow Sensor	CVS-001	Yes
Purification Return Flow Sensor	CVS-025	Yes
CVS Purification Return Line (Position Indicator)	CVS-PL-V081	Yes
Auxiliary Spray Line Isolation Valve (Position Indicator)	CVS-PL-V084	Yes
Boric Acid Storage Tank Level Sensor	CVS-109	Yes
Boric Acid Flow Sensor	CVS-115	Yes
Makeup Blend Valve (Position Indicator)	CVS-PL-V115	Yes
CVS Demineralized Water Isolation Valve (Position Indicator)	CVS-PL-V136A	Yes
CVS Demineralized Water Isolation Valve (Position Indicator)	CVS-PL-V136B	Yes
Makeup Pump Discharge Flow Sensor	CVS-157	Yes
Makeup Flow Control Valve (Position Indicator)	CVS-PL-V157	Yes